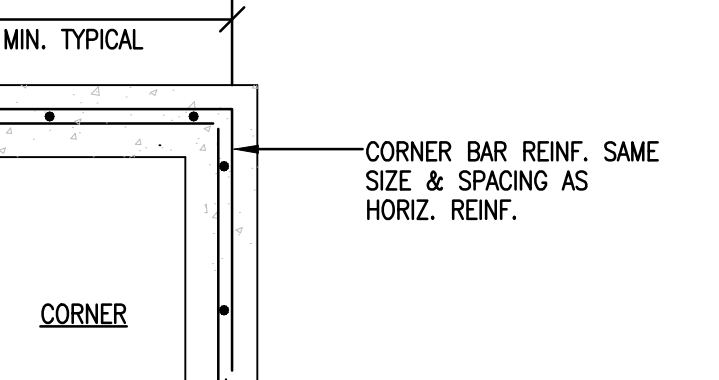
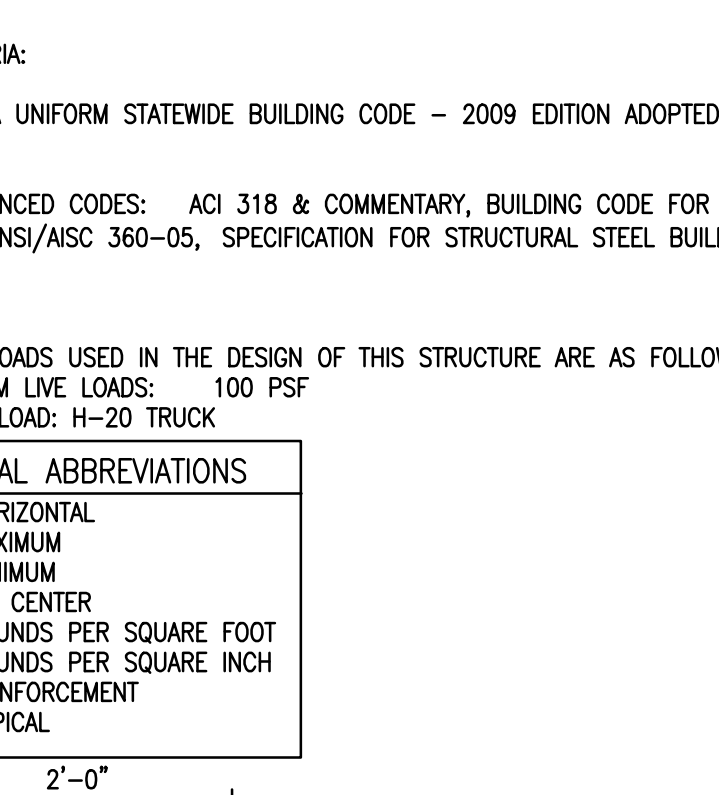
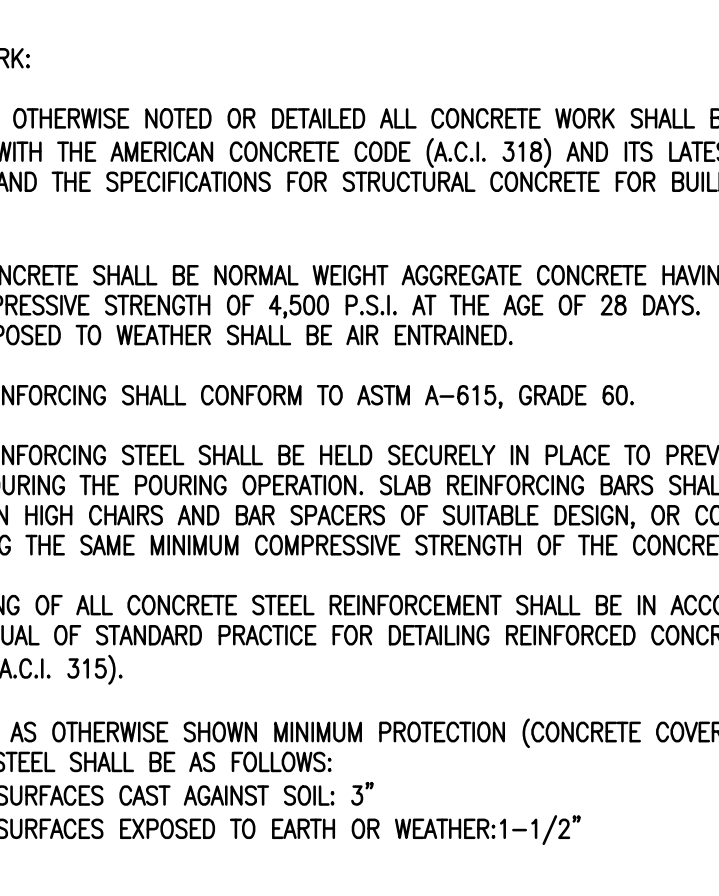
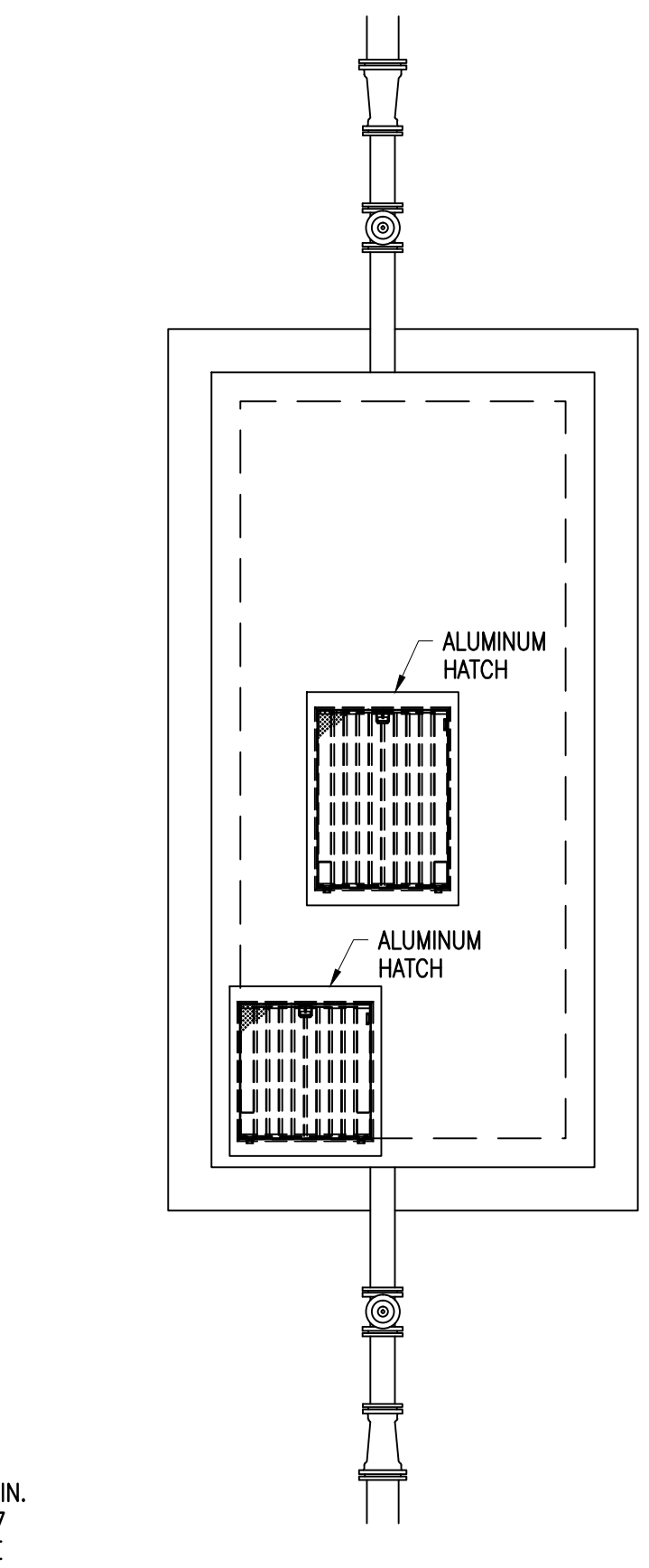
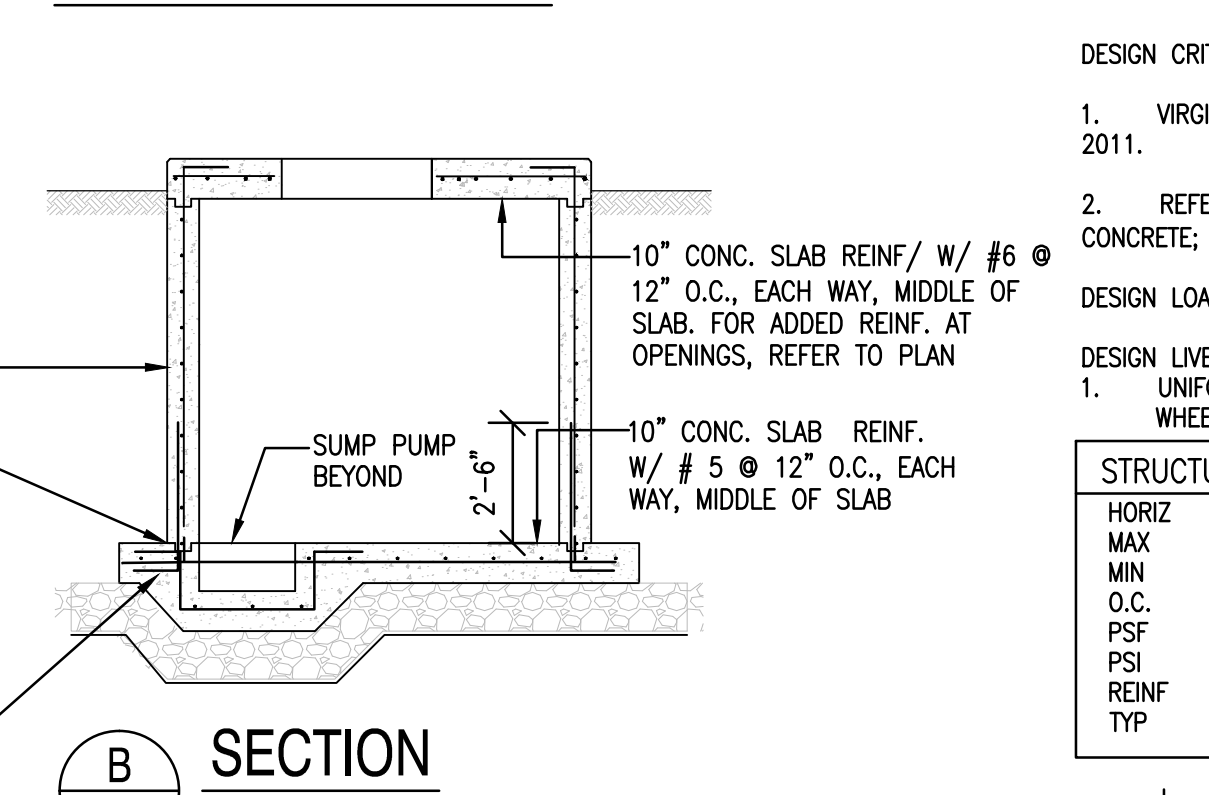
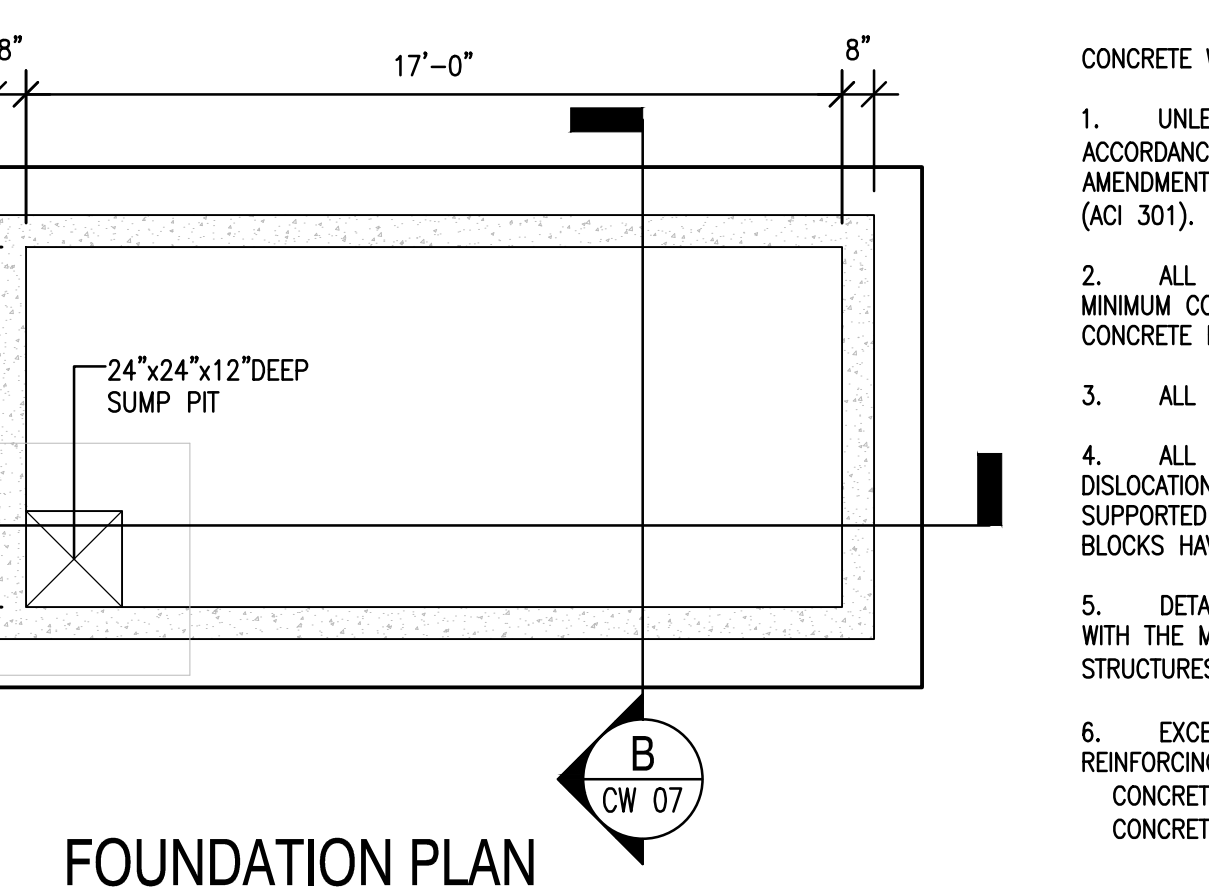
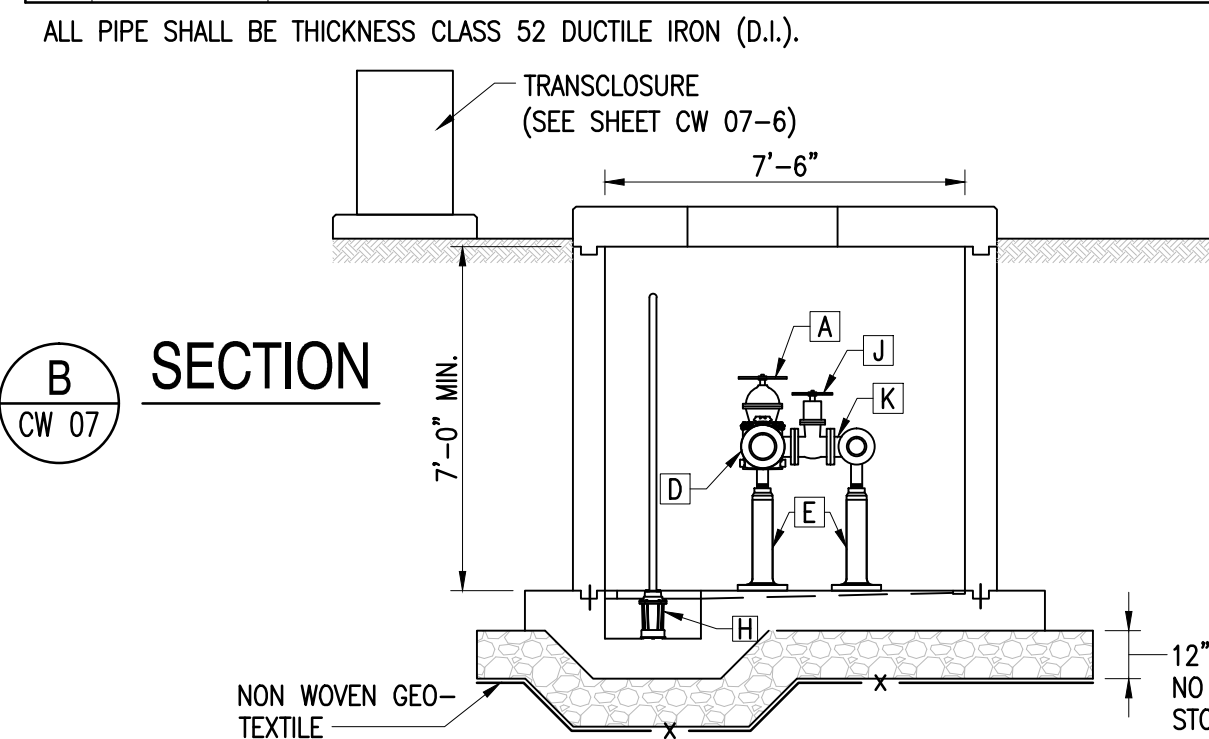


FITTING SCHEDULE		
NO.	SIZE	DESCRIPTION
[A]	6"	GATE VALVE WHEEL OPERATED
[B]	6"	GATE VALVE WITH VALVE BOX
[C]	6"	CHECK VALVE
[D]	6"	METER WITH STRAINER
[E]	-	PIPE SUPPORT
[F]	8" X 6"	REDUCER (AS REQUIRED)
[G]	6" X 4"	FLANGED TEE
[H]	-	SUMP PUMP
[J]	4"	GATE VALVE WHEEL OPERATED
[K]	4"	FLANGED 90 DEGREE ELBOW
[L]	4"	SPOOL PIECE
[M]	6"	SPOOL PIECE
[P]	6"	SMITH BLAIR 912 CAST FLANGED COUPLING ADAPTER OR APPROVED EQUAL
[Q]	-	WALL SLEEVE



GENERAL NOTES:

VAULT

- EXCAVATION FOR METER VAULT SHALL BE EXTENDED A MINIMUM OF 12" BELOW BOTTOM OF BASE SLAB ELEVATION. THE UNDERCUT EXCAVATION SHALL BE COVERED WITH A NON-WOVEN GEOTEXTILE FABRIC, SUCH AS, TREVIRA SPUNBOUND TYPE 1120 OR EQUIVALENT AND REFILLED TO THE REQUIRED GRADE WITH COARSE AGGREGATE VDOT SIZE NO. 57 (12" MINIMUM).
- PROVIDE 6 MIL MINIMUM POLYURETHANE VAPOR BARRIER BETWEEN BASE SLAB AND COARSE AGGREGATE.
- SHEAR KEYS AND AN APPROVED WATERSTOP SHALL BE PROVIDED AT ALL JOINTS.
- TOP SLAB SHALL BE DESIGNED FOR H-20 TRAFFIC LOADING. VAULT NOT INTENDED TO BE IN HIGH DENSITY TRAFFIC.
- ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-318.
- ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
- ALL EXTERIOR SURFACES OF THE VAULT BELOW GRADE SHALL RECEIVE A WATER TIGHT COAT OF FLEXIBLE FIBER REINFORCED ACRYLIC EMULSION WATER PROOFING MEMBRANE.
- ALL ITEMS INDICATED OR SHOWN SHALL BE INCLUDED IN THE COST OF THE VAULT.

DIMENSIONS

- TOP OF VAULT SHALL BE 6" ABOVE THE ADJACENT GROUND ELEVATION.
- VAULT SHALL HAVE A MINIMUM INTERIOR CLEAR HEIGHT OF 7'-0".
- INTERIOR PIPING SHALL BE 3' FROM PIPE CENTERLINE TO THE FLOOR AND A MINIMUM CLEAR DISTANCE OF 3' BETWEEN VAULT INTERIOR WALL AND EDGE OF PIPE.
- EXTERIOR GATE VALVES SHALL BE PLACED A MINIMUM OF 3' FROM VAULT EXTERIOR WALL.

LADDER

- LADDER SHALL BE ALUMINUM ASTM B221, ALLOY 6063 - T6.
- SIDERAILS SHALL BE CONTINUOUS EXTRUDED CHANNELS OR TUBES, NOT LESS THAN 2 1/2" DEEP, 3/4" WIDE, AND 1/8" THICK. MINIMUM CLEAR DISTANCE BETWEEN SIDERAILS SHALL BE 16".
- RUNGS SHALL BE EXTRUDED TUBES NOT LESS THAN 3/4" DEEP AND NOT LESS THAN 1/8" THICK, WITH RIBBED TREAD SURFACES. RUNG MINIMUM SPACING SHALL BE 16". EACH RUNG SHALL SUPPORT A MINIMUM LOAD OF 250 POUNDS PLACED AT THE CENTER OF THE RUNG.
- LADDER SHALL BE VERTICAL AND CENTERED ON THE HATCH. A MINIMUM CLEARANCE BETWEEN RUNGS AND VAULT INTERIOR WALL SHALL BE PROVIDED.
- PROVIDE TYPE 316 STAINLESS STEEL FASTENERS FOR FASTENING ALUMINUM.

ACCESS HATCHES

- ACCESS HATCHES SHALL BE 1/4" THICK DIAMOND PATTERN ALUMINUM COVER PLATE WITH TYPE 316 STAINLESS STEEL HINGES AND HARDWARE.
- ACCESS HATCHES SHALL BE RECESSED AND LOCKABLE. RECESSED LIFTING HANDLE AND RECESSED LOCK BOX FOR PADLOCK SHALL BE PROVIDED.
- MINIMUM HATCH SIZE SHALL BE 36" X 36" FOR LADDER ACCESS, 36" X 48" ABOVE EACH METER.
- HATCHES SHALL BE TRAFFIC RATED FOR OFF STREET LOCATIONS NOT SUBJECT TO HIGH DENSITY TRAFFIC.
- HATCHES SHALL BE SPRING ASSISTED OR HYDRAULIC ASSISTED.

ELECTRICAL SPECIFICATIONS

CONDUIT: SCHEDULE 80 PVC BELOW GRADE AND IN VAULT. RIGID GALV. STEEL IN TRANSCLUSURE.

POWER CONDUCTORS: COPPER TYPE THWN, 75°C, 600V.

PANEL: LOADCENTER, SEE SCHEDULE, COPPER BUS, SEPARATE GROUND BAR AND NEUTRAL BAR, COORDINATE SHORT CIRCUIT RATING WITH ELECTRIC UTILITY. PRIOR TO ORDERING. SERVICE ENTRANCE RATED.

SCADA: COORDINATE WITH CITY FOR PLC OR SCADA REQUIREMENTS (RADIO OR LANDLINE)

LIGHT FIXTURE: () VAPORTIGHT WALL MOUNTED, WITH GLOBE - LED LAMP 20W POWER - HUBBELL # VL15WIG OR EQUAL.

VAULT RECEPTACLE: () DUPLEX RECEPTACLE 20A, 125V, WEATHERPROOF "IN USE" ENCLOSURE. MOUNT 36" ABOVE BOTTOM VAULT.

FLOAT SWITCH: () MERCURY FLOAT SWITCH - HIGH WATER INDICATOR SET AT FLOOR LEVEL.

JUNCTION BOX: () NEMA 4 J-BOX - 4"x4"x2"

SWITCH: (S) 1P-20A, 120/277V, WEATHERPROOF-WET-ENCLOSURE. MOUNT WITHIN REACH TOP OF LADDER.

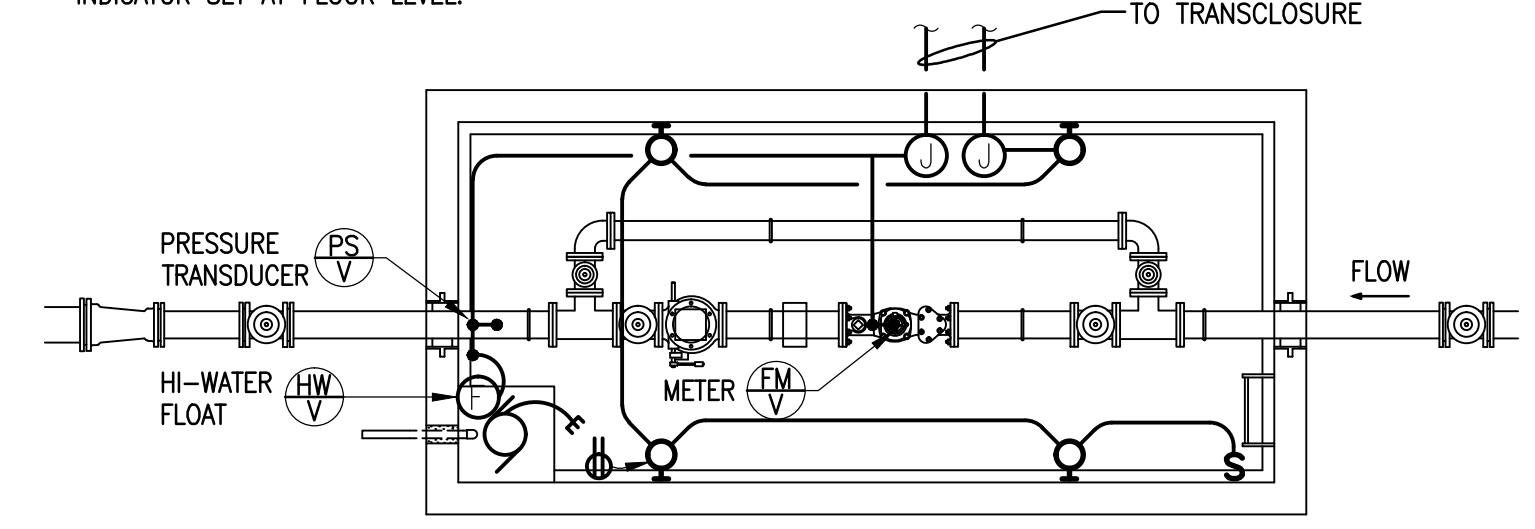
TRANSCLUSURE: SEE DETAIL

GROUND RODS: 3/4" x 10' CU-CLAD DRIVEN WITH TOP 1' BELOW GRADE.

GROUND CONNECTIONS: SHALL BE CADWELD WELDS.

CONDUIT SEALS: ALL CONDUIT PENETRATIONS OF VAULT AND TRANSCLUSURE PAD SHALL BE SEALED EACH END AFTER CONDUCTORS INSTALLED.

I/O REQUIREMENTS:
FM FLOW METER
PS PRESSURE TRANSDUCER
HW HIGH WATER FLOAT
SP SYSTEM POWER AT PANEL
TS TAMPER SWITCH(2)
TRANSCLUSURE
V VAULT



SINGLE 6" WATER METER VAULT

NOT TO SCALE

PANEL 'A' SCHEDULE											
60A, M.C.B., 120/240 V, 1 PHASE, 3 WIRE, 60HZ, SURGE PROTECTOR, SEE NOTE BELOW											
LOAD SERVED	LOAD	AMPS	BKR	WIRE	TRIP	WIRE	TRIP	WIRE	TRIP	LOAD	AMPS
LIGHTS - VAULT	3	20	12	1	2	12	20	7	5	SUMP PUMP	7
RECEPT - MAINT. VAULT	5	20	12	3	4	12	20	5	5	PLC	5
RECEPT - MAINT. POWER SIDE	5	20	12	5	6	12	20	5	5	RECEPT - COMM. SIDE	5
SPARE	0	20	12	7	8	12	20	0	0	SPARE	0
SPACE	0	20	12	9	10	12	20	0	0	SURGE PROTECTOR	0
SPACE	0	20	12	11	12	12	20	0	0		0
TOTAL 8 5											
TOTAL CONNECTED AMPS A: 20 B: 10											

NOTE: PRIOR TO ORDERING PANEL - CONTRACTOR SHALL CONFIRM AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY COMPANY.

METER AND PIPING

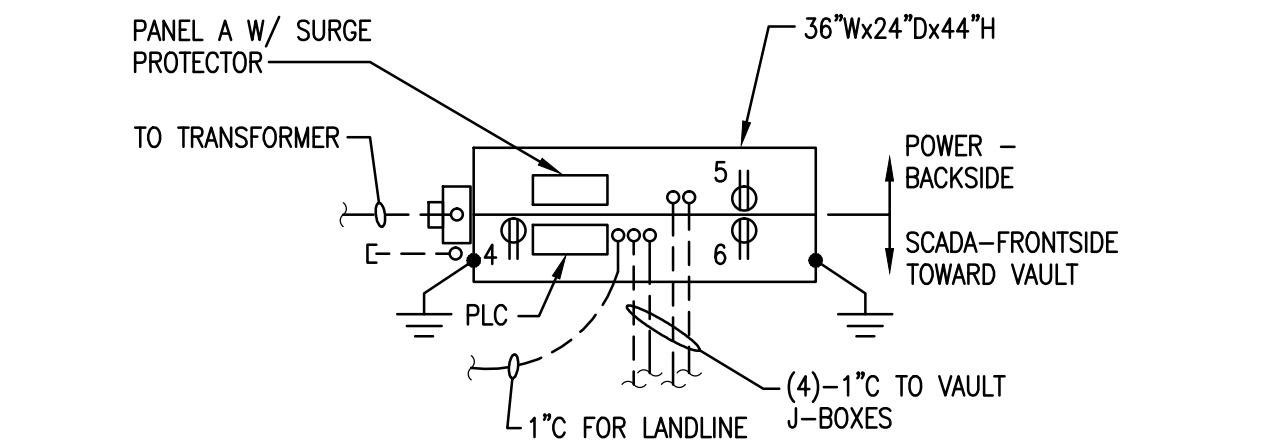
- ALL METERS, VALVES AND PIPING SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS AND STANDARDS.
- PIPING WITHIN VAULT SHALL BE DUCTILE IRON FLANGED PIPE. EXTERIOR PIPING SHALL BE DUCTILE IRON MECHANICAL JOINT (RESTRAINED) PIPE. ALL PIPING SHALL BE THICKNESS CLASS 52.
- METER OR METERS SHALL BE SENSUS TURBO-METER OR APPROVED EQUAL WITH STRAINER. (TO BE INSTALLED BY CITY FORCES).
- LENGTH OF SPOOL PIECE EACH SIDE OF METER SHALL BE A MINIMUM OF 5 PIPE DIAMETERS.
- AN ACCESS HATCH SHALL BE PROVIDED CENTERED OVER METER.
- GATE VALVES SHALL BE RESILIENT SEAT. GATE VALVES WITHIN VAULT SHALL BE WHEEL OPERATED. EXTERIOR GATE VALVES SHALL BE OPERATED WITH SQUARE NUTS. VALVES BOX SHALL BE AS PER UTILITIES STANDARD CWS 01 OR CWS 02 AS APPROPRIATE.
- BY-PASS PIPING, FITTINGS AND VALVES SHALL BE 4" IN DIAMETER.
- PIPING SHALL BE SUPPORTED BY MANUFACTURED CAST IRON OR GALVANIZED STEEL SUPPORTS.
- PIPING PENETRATIONS THROUGH CONCRETE SHALL BE SEALED USING LINK - SEAL AND A STEEL WALL SLEEVE WITH WATER STOP COLLAR.

SUMP PUMP

- PROVIDE A FLOAT OPERATED 12 GPM SUMP PUMP WITH PIT.
- PROVIDE 1 1/2" PVC SCHEDULE 80 DISCHARGE PIPE. DISCHARGE PIPING SHALL INCLUDE COUPLINGS, GATE VALVE, CHECK VALVE AND FITTINGS.
- TERMINATE SUMP DISCHARGE PIPING AT NEAREST STORM DRAINAGE STRUCTURE.

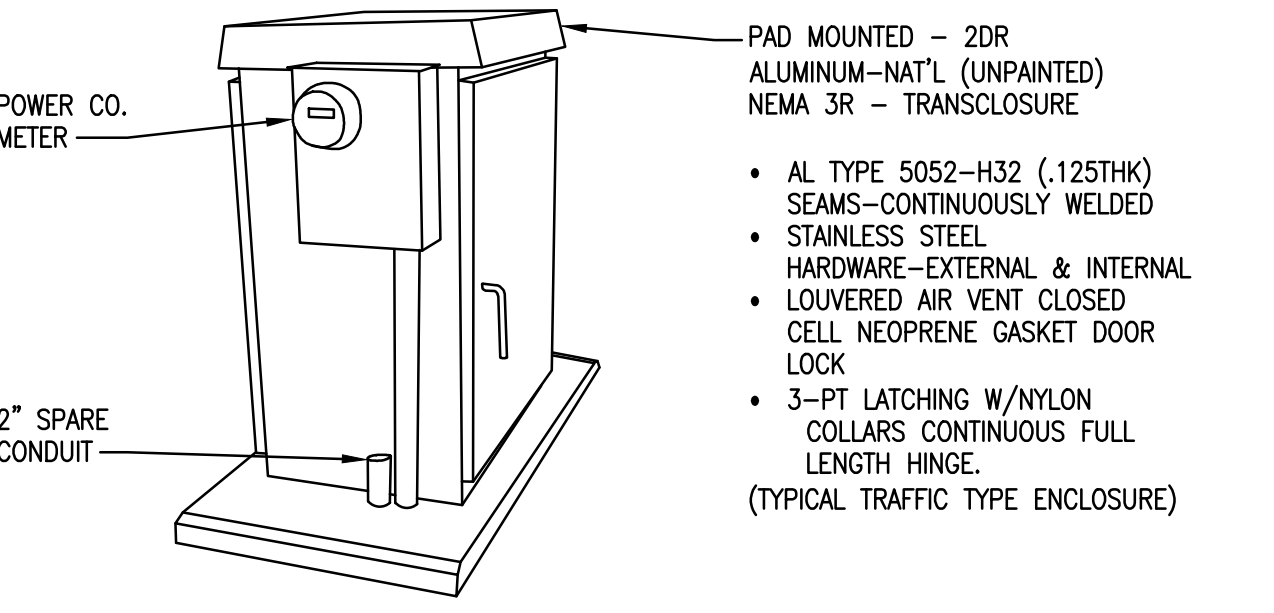
ELECTRICAL

- VAULT INTERIOR SHALL HAVE LIGHTING. SEE SHEET CW 07.
- PROVIDE TELEMETRY SYSTEM TO RELAY WATER METER DATA AS REQUIRED BY NORFOLK UTILITIES DEPARTMENT. MUST COORDINATE WITH MOST CURRENT SCADA REQUIREMENTS TO BE PROVIDED BY NORFOLK UTILITIES.



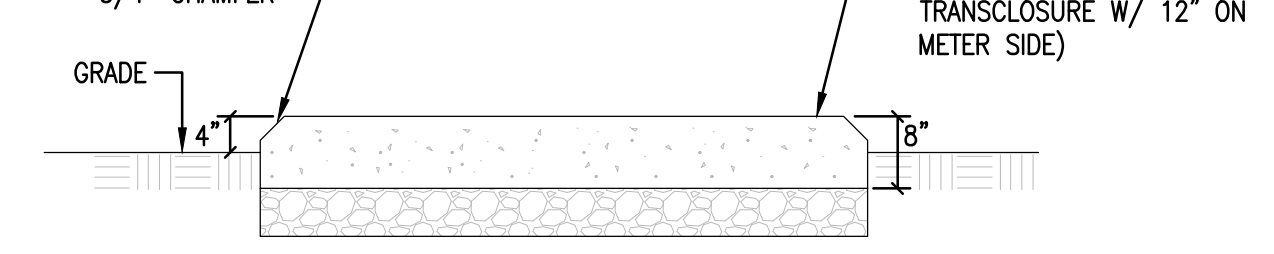
TRANSCLUSURE PLAN

NOT TO SCALE



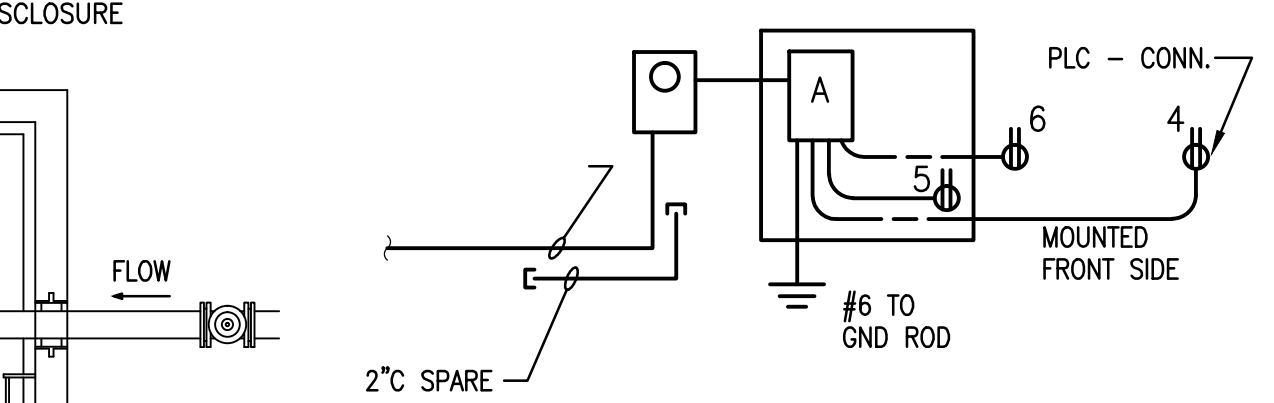
TRANSCLUSURE DETAIL

NOT TO SCALE



CONCRETE PAD DETAIL - (TRANSCLUSURE)

NOT TO SCALE



POWER RISER DIAGRAM

NOT TO SCALE



TYPICAL DETAIL SHOWING CONTINUOUS REINFORCING

AT CORNERS

NOT TO SCALE

